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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,605	10/22/2003	Stephen D. Shew	PAT 2720-2	4817

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EXAMINER
JONES, PRENELL P

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
08/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/689,605	SHEW ET AL.
	Examiner	Art Unit	
	Prenell P. Jones	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 April 2007*.

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-54* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-54* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-SB/08)
    Paper No(s)/Mail Date *12/24/03, 4/22/05,* .

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

U.S. Patent and Trademark Office

PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20070519

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2.   Claim 35 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 35, it starts with steps (g) & (h), but where are the preceding steps?

Regarding claim 36, Applicant is claiming "***method is effected without upgrading*** any one of the plurality of NEs," which is unclear to Examiner as to what exactly Applicants intent.

Claim Objections

3.   Claim 15 is objected to because of the following informalities: In line 1, "including" should be "encoded with" to comply with interim guidelines. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 35, 48 and 49 are rejected under 35 U.S.C. 102(b) as being anticipated

by Wing So (US PGPUB 20020109879).

        Regarding claim 35, Wing discloses improving communications network that has

a plurality of NEs, wherein the architecture includes a WDM optical network that consist

of a server and routers/network elements, whereby a server/router utilize combined

information that will be carried and shared between network elements via OSPF routing

function (paragraph 0079, 0190, 0377).

        Regarding claim 48 and 49, Wing discloses an internetworking communication

system and method for providing network configuration and control information, wherein

the architecture includes servers in a WDM optical switching environment wherein

communication exists among a plurality of network elements, such as routers (NEs),

whereby the network elements process (demodulate/decode) control traffic

information/control messages via input/output ports (Abstract, paragraphs 0004, 0079,

0086, 0087, 0102, 0103, 0106, 0107, 0109, 0141, 0322, 0347, 0356, 0364, 0367, 0606,

0942, and MPLS control plane being implemented on OXCs and LSRs and bearer

channels/plane can be activated and deactivated thereby implementing server/router

exclusion from bearer plane (paragraph 0408, 0436, 0461-0469).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

        (a) A patent may not be obtained though the invention is not identically disclosed
        or described as set forth in section 102 of this title, if the differences between the
        subject matter sought to be patented and the prior art are such that the subject
        matter as a whole would have been obvious at the time the invention was made

to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the

various claims was commonly owned at the time any inventions covered therein were

made absent any evidence to the contrary. Applicant is advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not

commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

5.   Claims 1-34, 37-47 and 50-54 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Wing (US PGPUB 20020109879) in view of Duncan et al (US PGPUB

20020154606).

          Regarding claim 46, as indicated above, Wing discloses improving

communications network that has a plurality of NEs, wherein the architecture includes a

WDM optical network that consist of a server and routers/network elements, whereby a

server/router utilize combined information that will be carried and shared between

network elements via OSPF routing function (paragraph 0079, 0190, 0377).

          Although Wing is not specific on databases include true topology information

with respect to NEs, in a data communication network that supports fiber optics, Duncan

discloses network management and determining the topology of a network (Abstract,

paragraph 0005, 0026, 0047), wherein the architecture includes processing configuration

as associated with links/ports/paths, which is added to network topology so that the true

topology of network is provided, wherein the tables/database store data such as ports

and links as associated with network elements (paragraph 0021, 0022, 0023, 0036,

0045, 0048, 0049, 0051).

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to be motivated to implement databases that include true topology

information with respect to NEs as taught by Duncan with the teachings of Wing for the

purpose of further managing the network configuration as it is associated in a client-

server environment.

Regarding claim 47, Wing further discloses each routing/server area maintaining

a link state database (paragraph 0079, 0141, 0436).

Regarding claim 1, Wing discloses an internetworking communication system

and method for providing network configuration and control information, wherein the

architecture includes servers in a WDM optical switching environment wherein

communication exists among a plurality of network elements, such as routers (NEs),

whereby the network elements process (demodulate/decode) control traffic

information/control messages via input/output ports (Abstract, paragraphs 0004, 0079,

0086, 0087, 0102, 0103, 0106, 0107, 0109, 0141, 0322, 0347, 0356, 0364, 0367, 0606,

0942, I/0 exchanging control messages with client NEs), routers, which inherently

includes a processor (processing entity), releases messages by releasing resources

(paragraph 0103, 0179, 0190, 0206, 0216, processing entity for implementing routing

function that provides routing resources to client NEs), and routing area/router may

contain a link state database containing fiber links, optical channel trails, and label

switched paths, routers associated with databases (paragraph 0084, 0103, 0436, 944,

processing entity operative to interact with a database about client NEs during implementation of routing function).

Although Wing is not specific on whether databases include true topology information with respect to NEs, in a data communication network that supports fiber optics, Duncan discloses network management and determining the topology of a network (Abstract, paragraph 0005, 0026, 0047), wherein the architecture includes processing configuration as associated with links/ports/paths, which is added to network topology so that the true topology of network is provided, wherein the tables/database store data such as ports and links as associated with network elements (paragraph 0021, 0022, 0023, 0036, 0045, 0048, 0049, 0051).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement databases that include true topology information with respect to NEs as taught by Duncan with the teachings of Wing for the purpose of further managing the network configuration as it is associated in a client-server environment.

Regarding claim 15, claim 15 includes the limitations of claim 1, but in the form of a computer readable storage medium that includes a program element on a server for execution of desired functions. So, claim 15 is rejected for the same reason that claim 1 is rejected, because it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to utilize executable computer programs as to carry out desired function of a computer device (server).

Regarding claim 25, claim 25 includes the limitations of claim 1, but in the form of a method that includes performing steps for providing routing functions, claim 25 is

rejected for the same reason that claim 1 is rejected, because it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to utilize method steps as to carry out desired function of a computer device (server).

Regarding claim 2, 16, 24, 26 and 37, Wing further discloses an optional architectural deployment, which includes the use of a single instance of a control plane (paragraph 0434, 0436).

Regarding claim 3, 17, 27 and 38, Wing further discloses servers/routers supporting CR-LDP (Constraint-based Routing—Label Distributed Protocol (paragraph 0179).

Regarding claim 4, 18, 28 and 39, Wing further discloses selecting routing protocols from a group consisting of OSPF, IS-IS and PNNI (paragraph 0136, 0410, 0469, 0793).

Regarding claim 5, 19 and 29, Wing further discloses OSPF routing function being able to be used for optical network topology discovery and distribution, as well as for route computation and path selection (paragraph 0341, 0347).

Regarding claims 6-9, 20-23, 30-33 and 40-44, Wing further discloses that the intelligent optical network may include a plurality of network elements (NEs) wherein all work as peers to dynamically establish optical paths through the network (paragraph 0078), and representation of the full physical network topology along with available resources on each link are obtained and updated via OSPF link state advertisements

(paragraph 0190, 0292, 0296), and topology advertisement associated with signaling

protocol can be based on existing protocols, networks, network elements (paragraph

0331, 0341, 0346, 0472, 0494).

　　Regarding claim 10, 24, 34 and 45, Wing further discloses combined information

that will be carried and shared between network elements (paragraph 0079, 0377).

　　Regarding claim 11 and 12, Wing further discloses MPLS control plane being

implemented on OXCs and LSRs and bearer channels/plane can be activated and

deactivated thereby implementing server/router exclusion from bearer plane (paragraph

0408, 0436, 0461-0469).

　　Regarding claim 13, Wing further discloses utilizing network elements selected in

the group of an ATM and SONET cross-connect/packet over SONET (paragraph 0079,

0182, 0285, 0290, 0330, 0419).

　　Regarding claim 14, Wing further discloses each routing/server area maintaining

a link state database (paragraph 0079, 0141, 0436).

　　Regarding claim 50 and 52, as indicated above, Wing discloses an

internetworking communication system and method for providing network configuration

and control information, wherein the architecture includes servers in a WDM optical

switching environment wherein communication exists among a plurality of network

elements, such as routers (NEs), whereby the network elements process

(demodulate/decode) control traffic information/control messages via input/output ports

(Abstract, paragraphs 0004, 0079, 0086, 0087, 0102, 0103, 0106, 0107, 0109, 0141, 0322, 0347, 0356, 0364, 0367, 0606, 0942, I/0 exchanging control messages with client NEs), routers, which inherently includes a processor (processing entity), releases messages by releasing resources (paragraph 0103, 0179, 0190, 0206, 0216, processing entity for implementing routing function that provides routing resources to client NEs), and routing area/router may contain a link state database containing fiber links, optical channel trails, and label switched paths, routers associated with databases (paragraph 0084, 0103, 0436, 944, processing entity operative to interact with a database about client NEs during implementation of routing function), and all work as peers to dynamically establish optical paths through the network (paragraph 0078), and representation of the full physical network topology along with available resources on each link are obtained and updated via OSPF link state advertisements (paragraph 0190, 0292, 0296), and topology advertisement associated with signaling protocol can be based on existing protocols, networks, network elements (paragraph 0331, 0341, 0346, 0472, 0494).

Although Wing is not specific on whether databases include true topology information with respect to NEs, in a data communication network that supports fiber optics, Duncan discloses network management and determining the topology of a network (Abstract, paragraph 0005, 0026, 0047), wherein the architecture includes processing configuration as associated with links/ports/paths, which is added to network topology so that the true topology of network is provided, wherein the tables/database store data such as ports and links as associated with network elements (paragraph 0021, 0022, 0023, 0036, 0045, 0048, 0049, 0051).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to databases include true topology information with

respect to NEs as taught by Duncan with the teachings of Wing for the purpose of further

managing the network configuration as it is associated in a client-server environment.

Regarding claim 51, Wing further discloses selecting routing protocols from a

group consisting of OSPF, IS-IS and PNNI (paragraph 0136, 0410, 0469, 0793).

Regarding claim 53 and 54, Wing further discloses MPLS control plane being

implemented on OXCs and LSRs and server/router exclusion from bearer plane
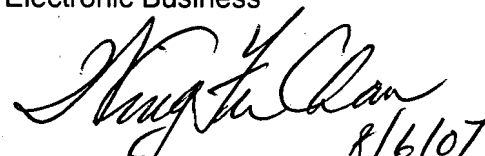
(paragraph 0408, 0436, 0461-0469).

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Prenell P. Jones whose telephone number is 571-272-

3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wing Chan can be reached on 571-272-7493. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

August 2, 2007

WING CHAN   8/6/07
SUPERVISORY PATENT EXAMINER